DOCUMENT RESUME

ED 149 875 RC 010 058

AUTHOR Kurtz, P. David; Lamb, Karen
TITLE Finding and Screening Children in Rural Areas: Finding a Needle in a Haystack.
PUB DATE 14 Apr 77
NOTE 17p.; Paper presented at the Annual Meeting of the Council for Exceptional Children (Atlanta, Georgia, April 14, 1977)

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS *Handicap Detection; *Handicapped Children; Home Visits; Identification; *Models; *Preschool Children; Questionnaires; *Rural Areas; Screening Tests; Socioeconomic Status; Telecommunication
IDENTIFIERS Denver Developmental Screening Test; *Pennsylvania; Prescreening Developmental Questionnaire

ABSTRACT

In an effort to develop a model for identifying handicapped preschoolers in rurally scattered communities, a Pennsylvania community (defined by township and school district lines) was selected for study. Employing school census data, a list of children under six years of age was used in conjunction with a public service announcement to produce a master list of 214 names to which letters were sent. By means of the letter, parents were asked to complete marked items on an enclosed age-appropriate Prescreening Developmental Questionnaire (PDQ) and to return it and a response card indicating agreement to participate in a screening schedule on one of three days. Telephone follow-up was used to contact those parents who did not respond and/or those parents needing transportation. Each child (N=140) participating in the initial three-day schedule was screened individually by a trained paraprofessional using the Denver Developmental Screening Test (DDST). A fourth day and/or home visits were scheduled by phone for "no shows" (60% of those who agreed to come to the fourth-day screening showed up, while all 26 of the scheduled home visits were completed). Results were: of the 214 children initially identified, 172 were screened, 11.6% of which had abnormal or questionable DDST results with 35% of those failing a second DDST; the correctly identified children came from 4 find-effort groups: mailing only (43%), no response after mailing, so phoned (14%), home visit (14%), and screening on the extra fourth day (29%). (JC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED149875

SEP 1977
ERIC/CRESS
RECEIVED

Finding and Screening Children in Rural Areas: Finding a Needle in a Haystack[1]

P. David Kurtz[2] and Karen Lamb[3]

April, 1977

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

P. David Kurtz

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

RC010058

---

1 Paper presented to the annual meeting of the Council for Exceptional Children, April 14, 1977, Atlanta.

2 Associate Professor of Social Work, School of Social Work, University of Tennessee, Nashville, Tennessee.

3 Assistant Professor of Child Development, College of Human Development, The Pennsylvania State University, University Park, Pennsylvania.

Finding and Screening Children in Rural Areas:

Finding a Needle in a Haystack

How many handicapped children are there in your community? This frequently asked question has no simple answer. The answer must vary with the degree of severity or impairment required to define a condition as handicapping. Further, the answer also varies according to the age of the children regarding whom the question is asked. For example, in one county-wide effort to exhaustively locate all handicapped children under the age of five years, the rate of handicaps found increased with each additional preschool year (Sower and Covert, 1975). The yield from school, agency, and physician referrals, a mass media campaign, and letter, phone, and questionnaire contacts with parents was 1.9 handicaps per thousand children at age two years; and the corresponding figures for ages three, four, and five years were, respectively, 4.2, 8.5, and 9.4. (The national special education rate is 106 per thousand school-aged children.) It appears to be the case that some handicapping conditions only become evident and/or a problem in environments more common to older children, that some handicapping conditions are the products of early experiences, and that some handicapping conditions are initially invisible given our current detection skills.

Nevertheless, it is reasonable to assume that many recognizable handicapping conditions, which could be limited or remediated, currently are not detected in the preschool years. Werner, Bierman, and French (1971) evaluated at ages two years and ten years, 1,000 children who had received good prenatal care in a multiracial, mutiethnic community. About 12% of two-year-olds were identified as handicapped, whereas about 33% of ten-year-olds had some identifiable problem.

(The later evaluation revealed children one or more grades below their chronological age group or with IQ's below 85, children with hyperkinetic symptoms or severe behavior problems, and children with other developmentally disadvantagious conditions.) The early recognition yield from various sources of information concerning these children was examined. According to birth certificates and hospital records eight of ten conditions easily detectable at birth were recognized then, in contrast to only five of 21 defects which require special diagnostic skills. Physicians and agencies identified only 37 additional children with problems before the special screening at age two years. That screening revealed 75 children not previously identified as handicapped.

Physicians, parents, and human service agencies have traditionally been the primary sources of early identification. However, it would appear that these sources recognize the more severely affected children but either do not recognize or at least fail to deliver services to more mildly affected children. A systematic study of early identification approaches was conducted by the PEECH Project (Zehrbach, 1975). The findings indicated that promoting a new program for handicapped children through contacting physicians and agencies and sending out mass mailings to the public was minimally successful and yielded few referrals. Somewhat more effective was a popular media campaign combined with an open house. The most effective approach was the advertisement of free developmented check-ups for all children ages three-to four-years, with parents informed by notices sent home through children already in school and through a house-to-house telephone survey.

Project Search (Makolin, Note 1) determined that extensive efforts to stimulate referrals from agencies and physicians, as well as mass media advertising such as pamphlets, radio station announcements, and newspaper articles, were generally ineffective in locating three-and-four-year-old handicapped

youngsters. The project decided to identify and screen all children in the appropriate age range. Direct-mail flyers and advertisements were used to notify parents of free check-ups to be conducted at several "clinics" set up in churches throughout the community. This procedure, combined with referrals and the screening of children attending Head Start and day care centers, resulted in an estimated 27% of the community's three- and four-year-olds being screened.

Available evidence suggests that the early recognition of developmental problems is unreliably handled by current means, including public awareness campaigns, and recommends the direct and repeated screening of all children. If developmental screening is to be undertaken on a large scale, methodological information is needed on how best to conduct such efforts.

The field research reported below was conducted in rural Pennsylvania and provides a model valid for such ecologies for the evaluation of child-find systems. As Zehrback (1975) has pointed out, no one approach to finding handicapped preschoolers is likely to be effective in all geographic areas and types of communities.

The authors desired to demonstrate effective early identification appropriate to small, scattered rural communities. A target community (as defined by township and school district lines) was selected which was typical of the geographical region in terms of population size, number of preschool children, and average income level. (Further constraints imposed were the requirements that at least one town exist within the township, that a recent school census have been taken within the school district, and that the target community not be closely associated with The Pennsylvania State University.) The regional person employed by the state department of education to locate and serve the preschool special education population headed the screening effort. The authors provided technical assistance.

METHOD

The approach chosen for demonstration was an agency-originated direct screening of all eligible children. (Considerations in selecting an approach are discussed elsewhere by Kurtz, Neisworth, and Laub, Note 2).

A master list of children under six years of age was prepared from school census data. The list included birth dates, addresses, phone numbers, and parents' names. Not available from the census were the names of children under six months of age and, of course, information on new residents. Sometimes parents identified younger siblings who were added to the master list. Also, a public service announcement on the screening appeared in the local newspaper and prompted some parents to volunteer their children for the checkup. Twenty-three children were added to the census-generated list, producing a total of 214 names.

A three-day-long schedule was set-up for screening the original 191 children. Four screeners were to be continuously available, and appointments were arbitrarily assigned at half-hour intervals. Letters which described the developmental checkup were sent to parents to inform them of their appointment time. Although the letter made it clear that keeping the appointment was voluntary, the response card enclosed did not provide the option of refusing the appointment. Available responses were the following:

___ Yes, I will bring my child to the screening at the appointed time.

___ Yes, I would like to bring my child, but please call me to arrange another time.

___ Yes, I will bring my child. I need transportation. Call me to arrange for it.

___ Please call me. I would like more information.

Parents were asked to complete the marked items on an enclosed age-appro-

priate Prescreening Developmental Questionnaire (PDQ) (Frankenburg, [illegible]oorninck, Liddell, and Dick, 1976) and to return it and the response card in a preaddressed and stamped envelope.

After time had been allowed for the return of the cards, efforts were made to contact by telephone those parents who had not responded to the letters. The data reported below probably overestimates the number of such follow-up calls required since some parents received letters asking them to respond by a date already past and therefore failed to respond. Parents were also called to provide requested information and to arrange transportation (only two cases) or alternative appointment times. Since the original three screening dates were all within a single week, a later screening day was added to accommodate the sick, hospitalized, or otherwise unavailable children of cooperative parents. Some parents could not be reached by telephone because they had moved, had no phone or an unlisted number, or were not at home whenever called. Administrative circumstances confined telephone efforts to the daytime hours. Often, if an appointment was not met during the screening, a phone call was made in an attempt to schedule a later appointment.

The general screening occurred in a church basement centrally located and well-known in the community. Toys and baby-sitting were available at the site, as were refreshments.

Each child was screened individually by a trained paraprofessional using the Denver Developmental Screening Test (DDST) (Frankenburg, Goldstein, and Camp, 1971). (Various screening options are described by Meier, 1973, 1975.) Test results were interpreted by professionals, one of whom handled "passes" while the other conferred with parents whose children were "questionable" or who had failed the screening. In the latter cases, it was reiterated that the DDST is not an intelligence test and that the goal of the screening was to find

children who might require special help before starting school. Arrangements for rescreening were made when it was possible to do so. Parents were advised that the rescreening was necessary since temporary circumstances, such as illness or tiredness, might have affected the screening results.

After the three days of screening, attempts were made to contact parents whose children were missed by the general screening, e.g., "no shows" and those without telephones. These efforts included further telephone calls and home visits. Home visits were made when parents selected this option in preference to a second appointment for screening or when no telephone number was available.

RESULTS

In 85 of 191 cases, the original and arbitrarily-assigned appointment time was accepted by the parents and the response card returned. In twenty-four cases, the parent agreed to the screening but required a telephone call to complete arrangements. One parent returned the card but refused the screening. Appointments for 31 children were confirmed by telephone after their parents failed to return the response card. Eight parents refused the screening when contacted by telephone. Twenty-three appointments were arranged in response to parental initiation. In summary, 163 children were expected during the three-day general screening. In fact, as Table 1 details, only 140 children were screened at that time.

Insert Table 1 about here

Over 90% of parents who confirmed their appointments by returning the card or initiated their own appointments actually showed up for the screening. As might be expected, parents who did not return the card and had to be called and persuaded to come had only a slightly better than 60% rate of showing up for

the general screen. There were 23 "no shows", i.e., children who had been expected and failed to keep their appointments.

In 42 cases there had been no communication with the parents prior to the general screening except for the original letter. Forty-one of these 65 children were subsequently scheduled for home visits or for screening on the extra fourth day. Follow-up efforts failed to locate 18 children. In five instances it appeared to be impossible to arrange an agreeable appointment time, and one parent refused the screening. Attendance at the special screening was unsatisfactory: only 60% of those who agreed to come to this screening showed up. In contrast, all 26 of those children whose parents consented by telephone to home visits were at home (See Table 2.).

Insert Table 2 about here

The total population of potential children from the census, together with those children whose parents brought them to the staff's attention, totaled 214. Of these 172 were screened and 42 were not. Of the 172 screened, 20 (or 11.6%) had questionable or abnormal results on the original DDST.

As indicated in Tables 1 and 2, of the 20 children who failed their first DDST, 7 (35%) failed and 9 (45%) passed a second DDST. Four parents (20%) refused to let their children be rescreened, including one parent who described her child as mentally retarded. The correctly identified children came from four find-effort groups: mailing only (43%), no response after mailing so phoned (14%), home visit (14%), and screening on the extra fourth day (29%).

A surprising finding was the lack of a significant correspondence between the parents' rating of their children's abilities on the PDQ and their children's actual performance on the DDST. Only 75% of those children who were passed by

their parents on the PDQ, passed the DDST when first screened. Six percent of the children screened whose parents rated them as passable, had questionable or abnormal performances when tested with the DDST. One percent were wrongly failed on the PDQ and subsequently passed the DDST. Only 2% of the PDQ's accurately predicted a failure on the original DDST. Of five children who failed a second DDST and for whom PDG's were available, two had failed and three had passed the PDQ.

SAMPLE

Demographic data is available only for those children who were screened. After the screening parents anonymously completed a brief questionnaire. The majority of the parents of the children screened had lived in Central Pennsylvania most of their lives (mothers--26.3 years, fathers--29.5 years). The parents of children who failed the DDST averaged a slightly longer period of residence (mothers--28.4 years, fathers--34.1 years), a circumstance perhaps reflecting primarily their ages. The mean combined yearly income for the general population of parents whose children were screened was approximately $11,700, while the mean yearly combined income for the parents whose children failed the DDST was about $9,200.

In terms of education, both mothers and fathers of the children screened, taken as a whole, reached a higher level than did the parents of the children who failed the DDST. Eighty-eight percent of the mothers in general had graduated from high school, while only 70% of the mothers whose children failed the screening were high school graduates. Seventy-nine percent of fathers in general had graduated from high school, while only 72% of fathers whose children failed the screening were high school graduates.

Discussion

In choosing an early identification procedure, considerations of efficiency are almost as important as those considerations which deal with effectiveness and ethics.

The finding here that the screening of 40% of a rural preschool census population can be secured simply by sending a letter with a proscribed appointment time for a general screening session is noteworthy. Further, 43% of the identified children came from this group. In a pilot effort in a small central Pennsylvania town of approximately 1000 persons, local volunteers, unaided by census data, had to make 175 telephone calls to screen 35 of 43 located children (a success rate of about 50% of the estimated total community population of that age). Rescreening yielded one identified child. It is efficient in regions with fairly stable populations to begin a find effort with a general mailing based on a school census.

An additional 20% of the census population was brought to the screening by a telephone call. This group falls into two parts distinguished by whether or not they responded to the mailing and, in turn, by whether or not they failed to keep their appointments.

One parent in the more responsive group refused rescreening, while six parents in the less responsive group refused screening. Nevertheless, one child was identified from the less responsive group, while the yield from the more responsive group was zero. Further, although many persons scheduled for the second screening failed to keep their appointments, two children were identified as a result of the extra effort. Of those children who kept their appointments in these two groups, 33% in each group was in need of services. While telephoning and an extra general screen involved high effort and low cooperation, that effort about doubled the early identification yield.

Those parents who initiated screening appeared to be least in need of screening. Children scheduled for home visits did not appear to be a population at particularly high risk. While some families required home visits because they had no telephone (presumably as an economy), other families were economi-

cally well-off and required a home visit because their telephone numbers were unlisted or for maternal convenience.

Few parents simply refused the screening (2%) when, as here, that option was not explicitly given. However, a distressingly large number of parents (20%) refused the rescreening. If parents of delayed children were more likely to refuse rescreening than were parents of normal children, the early identification yield might have been higher (5% instead of 3%, of all children identified). Since parents probably wish to avoid disadvantageous labelling of their children, the best follow-up of a general screening may be placement in developmentally integrated educational services, (when available) rather than reassessment.

The overall yield from this general screening is, perhaps, lower than might be expected (about 10%). While some of this is probably accountable in terms of those children who were never screened (about 20%), that group probably includes those children with previously identified handicaps (an estimated 5% based on Bierman et al., 1963). Only 2% of the identifiable handicapped population would then be unaccounted for. Some children apparently remain unidentified after general screenings, but the procedure is unfamiliar to parents at this time. Our task is not to reidentify children with known handicaps but to recognize children in need of and not currently receiving services. In another pilot effort, 33 children whose names were provided by the department of public assistance were screened, but none were delayed and most were in Headstart classes anyway. In the same geographical area, screening 120 children at a shopping center yielded three children identified as delayed after screening. As professionals we need a population to serve, but we must abandon our squabbles over the handful of preschoolers with known handicaps. We must develop innovative and effective ways to locate the unrecognized preschoolers who need our special services.

Reference Notes

Macklin, J. Project Search. Unpublished report, Carroll County Board of Education, Westminister, Md., 1975.

Kurtz, P. David, Neisworth, J. T., and Laub, K. W. Emerging issues concerning the early identification of handicapped children. Unpublished paper, Division of Individual and Family Studies, The Pennsylvania State University, 1976.

Table 1

Children Tested at General Screen, by Contact Type

	# of children confirmed	refused DDST 1	no shows	# screened	of # screened failed DDST 1	of # failing DDST 1 failed DDST 2	refused DDST 2	passed DDST 2
card only	85 100%	1	8 9.4%	77 90.6%	8 10.4%	3 37.5	1	4
card and phone confirmation	22 100%	0	2 9.1%	20 90.9%	3 15%	0 0	1	2
card and phone for more information	2 100%	3	0 0	2 100%	0 0%	0 0%		0
no response so phoned	31 100%	5	12 38.7%	19 61.3%	3 15.8%	1 33%	1	1
parent initiated	23 100%	0	1 4.4%	22 95.6%	1 4.5%	0 0%		1
total	163	9	23	140	15	4	3	8

Table 2

Children Screened by Home Visit or Second Screen

	# of children confirmed	refused DDST 1	no shows	# screened	of # screened failed DDST 1	of # failing DDST 1 failed DDST 2	refused DDST 2	passed DDST 2
home visit confirmed by phone	26	0	0	26	3	1	1	1
	100%	0%	0%	100%	11.5%	33		
second screen confirmed by phone	15	0	9	6	2	2	0	0
	100%	0%	60%	40%	33%	100%		
total	41	0	9	32	5	3	1	1